

Applicant has invented an apparatus for decorating an object with the heat-transfer label of a heat-transfer label assembly includes a decorating unit for applying the heat-transfer label onto the object during an extended period of decoration and a conveying mechanism for continuously, rotationally advancing and supporting the object during the extended period of decoration. The decorating unit includes a preheater for heating the heat-transfer label assembly before the period of decoration, a generally flat, heated contact plate which is adapted to pivot so as to continuously urge the heat-transfer label into contact with the object throughout the extended period of decoration and a transport assembly for advancing the heat-transfer label assembly from the preheater to the heated contact plate. The heated contact plate includes a rubber layer constructed of an 80 durometer silicone and a 0.10 inches thick, TEFLON fiberglass cloth covering mounted on the rubber layer.

Claims 1, 2, and 18 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,650,037 to M.G. Larson (hereinafter Larson). In support of the rejection, the Examiner commented,

Larson discloses a decorating apparatus with decorating units (25, 26, 27). Containers that are to be decorated or labeled, as the case may be, are supplied to the machine by an infeed belt conveyor (18) on which the containers (17) have little, if any, space between them. After the containers (17) on the turntable (12) are decorated, at one or more of the decorating stations in units (25, 26, 27), the containers are transferred consecutively from turntable (12) to an outfeed starwheel (28). The starwheel (28) discharges the decorated containers to linear outfeed conveyors (29, 30) in the stated order. In the decorating units (25, 26, 27), the web advances away from metering rolls (98, 99) to pass around successive idler rolls (101, 102) and a roll (103) on a shuttle system which is designated generally by the numeral (100). The function and structure of the shuttle system will be discussed in detail later. After passing around the shuttle roll (103), the web (95) goes around an idler roll (105) and, after passing a detector (106) for a registration mark (211) the web moves along and in contact with an elongated plate (107) with the opposite side from the inked side of the web bearing on the platen. The platen

is heated with temperature regulated electric heaters to warm the ink which is necessary for it to be released from the web substrate. The web emerges from the heated platen (107) and passes between a roller (108), of eight identical rollers, on typical transfer head (70) and the periphery of a container at the decorating station (9) which is the place where the graphics or thermal transfer ink images are rolled onto rotary containers (15) in succession.

This rejection is respectfully traversed.

With respect to claims 1 and 18, as amended, applicant claims an apparatus for applying the transfer label of a transfer label assembly onto an object, the apparatus comprising, inter alia, a decorating unit for applying the transfer label onto the object and a conveying mechanism for advancing and supporting the object during label transfer. As will be described further in detail below, Larson does not disclose applicant's claimed apparatus, as amended.

As a first point, applicant claims a decorating unit comprising a contact plate which includes an elongated, flat contact surface, said heated contact plate continuously urging the transfer label into contact with the object during label transfer. To the contrary, elongated platen (107) in Larson does not urge the transfer label into contact with the object during label transfer. Rather, elongated platen (107) in Larson serves merely to pre-heat the transfer label prior to label transfer. In fact, Larson utilizes a roller (108), not platen (107), to urge the transfer label into contact with the object during label transfer. As can be appreciated, the use of an elongated plate, rather than a roller, to perform the label transfer serves to create a longer label transfer contact period which, in turn, improves the quality of the label transfer, which is a principal object of the present invention. See page 23, lines 5-13 of the subject patent application.

As a second point, applicant claims a decorating unit comprising a contact plate which is adapted to pivot during label transfer. To the contrary, elongated platen (107) in Larson is not

adapted to pivot. Rather, elongated plate (107) in Larson is fixed in position. As can be appreciated, providing a contact plate which is capable of pivoting during label transfer increases the length of the label transfer contact period which, in turn, improves the quality of the label transfer, which is a principal object of the present invention.

With respect to claim 2, applicant wishes to note to the Examiner that claim 2 is being canceled herewith.

Withdrawal of the rejection of claims 1, 2 and 18 under 35 U.S.C. 102(b) as being anticipated by Larson is respectfully urged.

Claims 1-3 and 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,250,129 to T.J. Twele (hereinafter Twele) in view of U.S. Patent No. 5,650,028 to T.L. Brandt et al. (hereinafter Brandt). In support of the rejection, the Examiner commented,

Twele discloses an apparatus for applying heat sensitive labels. Figure 1 shows a device for applying heat sensitive labels where the heater (2) heats the labels and then a reciprocating platen (21) is used to press the labels onto the containers. (Col. 2, lines 46-63).

The platen in Twele is not heated.

Brandt discloses a container labeling system. As shown in Figure 2, the labeling web (112) is passed across a warm platen (130) prior to the label transfer station. A heated roll (134) is then used to press the label onto each container, and the backing layer (10) is then removed by a take-up reel (150). (Col. 6, lines 14-24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a heated plate, like the one disclosed in Brandt, in the device of Twele, because Brandt teaches that it is favorable to have a heating means both before and while pressing the label onto the article when a heat activated label is used. Also, one having ordinary skill in the art would appreciate that is necessary to ensure the adhesive remains heated during the label application to the container and by heating the applicator in Twele, such as is done in Brandt, ensures that the adhesive remains tacky.

Regarding claim 3, the platen in Twele is reciprocating.

This rejection is respectfully traversed.

With respect to claims 1 and 12, as amended, applicant claims a decorating unit for applying a heat-transfer label onto an object, the decorating unit comprising, inter alia, a heated contact plate which includes an elongated, flat contact surface, the heated contact plate being adapted to pivot during label transfer so that the elongated, flat contact surface of the heated contact plate continuously urges the heat-transfer label into contact with the object. As will be described further in detail below, taking Twele in view of Brandt does not render applicant's claimed apparatus unpatentable.

As a first point, applicant claims a decorating unit comprising a heated contact plate which includes an elongated, flat contact surface, the heated contact plate being adapted to pivot during label transfer so that the elongated, flat contact surface urges the heat-transfer label into contact with the object. To the contrary, the device shown in Fig. 1 of Twele does not include a contact plate which includes a contact area for urging the heat-transfer label into contact with the object which is in the form of an elongated, flat surface. Rather, Twele discloses a device in Fig. 1 which includes a platen (21) for urging a heat-transfer label into contact with an object which includes a contact area for urging the heat-transfer label into contact with the object which is in the form of a narrow, curved surface. See Fig. 1 of Twele. In fact, applicant respectfully contends that the device shown in Fig. 1 of Twele includes a platen (21) which includes a contact area for urging the heat-transfer label into contact with an object which is in the form of a roller, and not an elongated, flat plate (the longitudinal axis of said roller being represented by the center circle shown on platen (21); the roller being shown in greater detail in U.S. Patent No. 4,452,659 to Geurtsen et al., the roller being identified by reference numeral 17). As can be appreciated,

a contact surface in the form of an elongated flat plate, as in applicant's claimed invention, rather than a narrow, curved surface (e.g., a roller), as disclosed in Fig. 1 of Twele, enables applicant's claimed invention to perform a label transfer about a longer label transfer contact period which, in turn, improves the quality of the label transfer, which is a principal object of the present invention.

As a second point, applicant respectfully disagrees with the Examiner's contention that it would have been obvious to one having ordinary skill in the art at the time the invention was made "to use a heated plate, like the one disclosed in Brandt, in the device of Twele." Not only does Brandt disclose a heated roller, not a heated plate, but applicant respectfully contends that combining Brandt with Twele is only obvious based on applicant's own disclosure.

With respect to claims 2, 3, 14 and 15, applicant wishes to note to the Examiner that claims 2, 3, 14 and 15 are being canceled herewith.

Withdrawal of the rejection of claims 1-3 and 12-14 under 35 U.S.C. 103(a) as being unpatentable over Twele in view of Brandt is respectfully urged.

Claims 4, 5, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Twele in view of Brandt as applied to claims 1 and 3 above, and further in view of U.S. Patent No. 6,402,868 to K. Tagawa et al. (hereinafter Tagawa). In support of the rejection, the Examiner commented,

Neither Twele nor Brandt teach having a rubber layer on the heated applicator, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a rubber layer, because it is well known that rubber helps to uniformly distribute the heat. This would help ensure the entire label is heated and the adhesive thereon are heated sufficiently. This is discussed in Tagawa. (Col. 4, lines 14-18).

Regarding claims 5 and 15, it is within the purview of one having ordinary skill in the art to use a rubber layer of 80 durometer silicone. The artisan would see the advantages of using that type of rubber.

This rejection is respectfully traversed.

As a first point, applicant contends that claims 4 and 5 are in allowable form for being dependent upon claim 1, which applicant believes in allowable form for the reasons noted above, and applicant contends that claim 15 is in allowable form for being dependent upon claim 12, which applicant believes is in allowable form for the reasons noted above.

As a second point, applicant disagrees with the Examiner's contention that it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a rubber layer on the platen disclosed in Twele in view of Tagawa. Specifically, Tagawa discloses a method for connecting metals together not for transferring a label onto a container. Due to its use in a completely different application, applicant respectfully contends that Tagawa is non-analogous art and, therefore, it would not be obvious to combine Twele in view of Brandt and further in view of Tagawa.

Withdrawal of the rejection of claims 4, 5, and 15 under 35 U.S.C. 103(a) as being unpatentable over Twele in view of Brandt as applied to claims 1 and 3 above, and further in view of Tagawa is respectfully urged.

Claims 6-11, 16, and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Twele in view of Brandt and Tagawa as applied to claim 5 above, and further in view of U.S. Patent No. 5,817,210 to M.W. Morin (hereinafter Morin). In support of the rejection, the Examiner commented,

Twele in view of Brandt and Tagawa does not disclose have a TEFLON fiberglass covering.

Morin teaches using a TEFLON fabric sheet (107), comprised of a 6 mil Teflon, fiberglass fabric whose purpose is to substantially reduce the tendency of the rubber pad (106) to stick to a transfer sheet. (Col. 4, lines 20-41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a Teflon sheet, as disclosed in Morin, in the device of Twele in view of Brandt and Tagawa, because Morin teaches that such a sheet would reduce the tendency of the transfer sheet from sticking to the rubber layer on the peeler bar. The Teflon sheet in Morin is .23 inches, however it is within the purview of one having ordinary skill in the art to use a thinner sheet, because the artisan would know what thickness of Teflon would work in the device of Twele in view of Brandt and Tagawa.

Regarding claims 7 and 17, it would have been obvious to one having ordinary skill in the art at the time the invention was made to heat the contact plate to 450 degrees F, because it is within the purview of the artisan to know what temperature is need to heat the adhesive on the label sufficiently to ensure the adhesive adheres to the article.

Regarding claims 8-11, these features are shown in the device of Twele as seen in Figure 1.

This rejection is respectfully traversed.

With regard to claims 6-11, applicant contends that claims 6-11 are in allowable form for being dependent upon claim 1, which applicant believes in allowable form for the reasons noted above.

With regard to claims 16 and 17, applicant contends that claims 16 and 17 are in allowable form for being dependent upon claim 12, which applicant believes is in allowable form for the reasons noted above.

Withdrawal of the rejection of claims 6-11, 16, and 17 under 35 U.S.C. 103(a) as being unpatentable over Twele in view of Brandt and Tagawa as applied to claim 5 above, and further in view of Morin is respectfully urged.


The prior art made of record and not relied upon by the Examiner is noted.

Allowance of the application with claims 1, 4-12 and 15-22 is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.

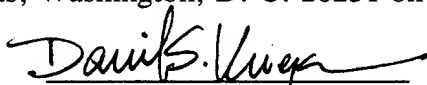
Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box Fee Amendment, Commissioner for Patents, Washington, D. C. 20231 on 7-23-02.


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MARKED-UP AMENDED CLAIMS 1, 4, 8, 12, 15 AND 18:

1. (Amended) An apparatus for applying the heat-transfer label of a heat-transfer label assembly onto an object, said apparatus comprising:

a. a decorating unit for applying the heat-transfer label onto the object [during a period of decoration], said decorating unit comprising a heated contact plate which includes an elongated, flat contact surface, [which is disposed] said heated contact plate being adapted to pivot during label transfer so that the elongated, flat contact surface of the heated contact plate [to] continuously [urge] urges the heat-transfer label into contact with the object [throughout the period of decoration]; and

b. [an] a conveying mechanism for advancing and supporting the object during label transfer [throughout the period of decoration].

4. (Amended) The apparatus of claim 1 [3] wherein the contact plate comprises a heating plate and a rubber layer mounted on said heating plate..

8. (Amended) The apparatus of claim 7 wherein said decorating unit further comprises an elongated heated preheater for heating the heat-transfer label before label transfer [the period of decoration].

12. (Amended) A decorating unit for applying the heat-transfer label of a heat-transfer label assembly onto an object [during a period of decoration], said decorating unit comprising:

a. a preheater for heating the heat-transfer label assembly before label transfer [the period of decoration];

b. a heated contact plate which includes an elongated, flat contact surface, [which is disposed] said heated contact plate being adapted to pivot during label transfer so that the elongated, flat contact surface of the heated contact plate [to] continuously [urge] urges the heat-transfer label into contact with the object [throughout the period of decoration]; and

b. a transport assembly for advancing the heat-transfer label assembly from said preheater to said heated contact plate.

15. (Amended) The decorating unit of claim 12 [14] wherein said heated contact plate includes a rubber layer which is constructed of an 80 durometer silicone.

18. (Amended) An apparatus for applying the transfer label of a transfer label assembly onto an object, said apparatus comprising:

a. a decorating unit for applying the label onto the object [during a period of decoration], said decorating unit comprising a contact plate which includes an elongated, flat contact surface, [which is disposed] said heated contact plate being adapted to pivot during label transfer so that the elongated, flat contact surface of the heated contact plate [to] continuously [urge] urges the transfer label into contact with the object [throughout the period of decoration]; and

b. [an] a conveying mechanism for advancing and supporting the object during label transfer [throughout the period of decoration].